

STATE OF TENNESSEE DEPARTMENT OF HEALTH **ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL Lab Services - Jackson Regional Lab Jackson, TN 38301 731-426-0686

TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201

TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

Sent To:

Greg Denton

TDEC-WPC

6th Floor, L & C Tower Annex

401 Church Street

Nashville, TN 37243-1534

Michael Atchley **TDEC-WPC**

Knoxville FO

3711 Middlebrook Pike Knoxville, TN 37921

Lab ID: K00002586

Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code:

327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

K00002586001

Project Name:

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY012.1RO

Date/Time Collected:

07/09/2009 09:58

Sampler's Name:

Geoff Klein

County: Sample Matrix: **ROANE - 73**

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Chlorine, residua	ai:	·
Conductivity:	107	uMHO
Temperature:	25.50	

7.62

Dissolved Oxygen: 6.22

Other: Flow:

Field Determinations

pH:

mg/L **CFS**

pH Units

TEST: Alkalinity, Total	METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS MDL		MQL	ANALYZED BY:	DATE	
Total Alkalinity	27	mg/L	3.8	10	S Burchfield	7/14/2009	

TEST: Hardness, Calcium	ME.	THOD: SM 350				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	26	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable		THOD: SM 254	0F	٠.			
ANALYTE	RESULT	RESULT UNITS MDL		MQL	ANALYZED BY:	DATE	
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009	

TEST: Residue, Suspended	ME:					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586002

Project Name:

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

2

Station No.:

EMORY002.1RO

Date/Time Collected: Sampler's Name:

07/09/2009 11:02

County:

Geoff Klein **ROANE - 73**

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20

Agency Invoiced: **Priority Date:**

TDEC-WPC TDEC-WPC

Date/Time Received:

07/19/2009

07/09/2009

14:07

Received By:

E McCrary

pH: 8.24 pH Units Chiorine, residual: Conductivity: 149 uMHO

27.80

Temperature: **Dissolved Oxygen:** 8.27

mg/L

Other:

Field Determinations

Flow: **CFS**

TEST: Alkalinity, Total	WE.	THOD: EPA 31			•		
ANALYTE	RESULT UNITS MDL		MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	42	mg/L	3.8	10	S Burchfield	7/14/2009	

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	39	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	ME:	THOD: SM 254	0F	4.		
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002586003

Project Name:

Sample Description:

Approx 100' D/S from middle dredge point

Sampler Project Name: TVA Ash Spill

Project Site No.:

2A

Station No.:

Dredge Plume

Date/Time Collected:

07/09/2009 11:11

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH:

8.21

pH Units

Chlorine, residual:

Conductivity:

186

uMHO

Temperature: 25.41

Dissolved Oxygen: 9.13

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME:					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	74	mg/L	3.8	10	S Burchfield	7/14/2009

TEST: Hardness, Calcium	METHOD: SM 3500-Ca D					4,
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	63	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	METHOD: SM 2540F						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009	

TEST: Residue, Suspended	ME.	THOD: SM 254	0D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586004

Project Name:

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

2B

EMORY001.9RO **Date/Time Collected:** 11:17

Sampler's Name:

07/09/2009

County:

Geoff Klein

Sample Matrix: EFO:

ROANE - 73 Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: Agency invoiced: **TDEC-WPC** 327.34-20 **TDEC-WPC**

Priority Date:

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

TEST: Alkalinity, Total	METHOD: EPA 310.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	81	mg/L	3.8	10	S Burchfield	7/14/2009

Field Determinations

Dissolved Oxygen: 9.43

Chlorine, residual:

Conductivity:

Temperature:

8.34

187

25.23

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

TEST: Hardness, Calcium	MET	METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	69	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	ME.	THOD: SM 254	0F			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	ME.	THOD: SM 2540	DD			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	12	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002586005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

TVA Ach Spill

Project Site No.:

3

Station No.:

EMORY001.7RO

Date/Time Collected:

07/09/2009 11:26

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH:

8.55

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature:

244

25.67

Dissolved Oxygen: 10.35

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	MET	THOD: EPA 31	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	S Burchfield	7/14/2009

TEST: Hardness, Calcium	ME.	THOD: SM 350	0-Ca D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	ME	THOD: SM 254	0 F			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	ME	THOD: SM 254	0D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Station No.:

EMORY000.1RO

Date/Time Collected:

Sampler's Name:

Project Site No.:

07/09/2009 11:34

County:

Geoff Klein **ROANE - 73**

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville **TDEC-WPC**

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

pH:	8.59	pH Units
Chlorine, residua	d:	
Conductivity:	276	uMHO

Conductivity: 276

Field Determinations

Temperature: 24.88

Dissolved Oxygen: 11.08

mg/L

Other: Flow:

CFS

TEST: Alkalinity, Total	ME	THOD: EPA 31	0.2			
ANALYTE	RESULT	UNITS	MDL.	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	S Burchfield	7/14/2009

TEST: Hardness, Calcium	MET	THOD: SM 350	0-Ca D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	90	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	WE.					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	ME	THOD: SM 254				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected:

07/09/2009 11:48

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To:

TDEC-WPC TDEC-WPC

Agency Invoiced: Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH: 8.23

Chlorine, residual:

pH Units

Conductivity:

278

uMHO

Temperature: 26.03 **Dissolved Oxygen: 9.20**

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	inity, Total METHOD: EPA 310.2						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Total Alkalinity	100	mg/L	3.8	10	M Chen	7/15/2009	

TEST: Hardness, Calcium	ME	THOD: SM 350				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	84	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable ANALYTE	ME					
	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	ME.		•			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586008

Project Name:

Sample Description:

Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill **Project Site No.:**

5A

Station No.:

Date/Time Collected:

KingAshOutF2

Sampler's Name:

07/09/2009 11:54

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency:

TDEC-WPC

Billing Code:

327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH:

8.04

pH Units

Chlorine, residual:

Conductivity:

284

uMHO

Temperature: 26.80

Dissolved Oxygen: 8.38

mg/L

Other:

Flow:

CFS

TEST: Alkalinity, Total	ME ⁻	THOD: EPA 31				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium	ME	THOD: SM 350				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	82	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	ME.					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	METHOD: SM 2540D					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	15	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586009

Project Name: Sample Description:

Clinch River mile 4.5 near Sugar Grove Valley F Chlorine, residual:

Field Determinations

Dissolved Oxygen: 10.44

Conductivity:

Temperature:

8.22

280

22.14

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected:

07/09/2009 12:04

Sampler's Name:

Geoff Klein

County: Sample Matrix: **ROANE - 73**

EFO:

Water

Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

TEST: Alkalinity, Total	WE.					
ANALYTE	RESULT	UNITS	MDL	MQL ANALYZED BY:	DATE	
Total Alkalinity	98	mg/L	3.8	10	M Chen	7/15/2009

TEST: Hardness, Calcium	MET	THOD: SM 350				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	89	mg/L	0.7	1	P Leathers	7/14/2009

TEST: Residue, Settleable	ME.	THOD: SM 254	0F			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	7/10/2009

TEST: Residue, Suspended	MET	THOD: SM 254)D			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U ;	mg/L	10	10	A Peeples	7/10/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit



STATE OF TENNESSEE DEPARTMENT OF HEALTH ENVIRONMENTAL LABORATORIES

TDH: Lab Services JRL Lab Services - Jackson Regional Lab Jackson, TN 38301 731-426-0686 TDH: Lab Services KRL Lab Services - Knoxville Regional Lab Knoxville, TN 37920 865-549-5201 TDH: Lab Services NCL Lab Services - Nashville Central Lab Nashville, TN 37243 615-262-6300

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Greg Denton

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6th Floor, L & C Tower Annex

401 Church Street

Nashville, TN 37243-1534

Michael Atchley TDEC-WPC

Knoxville FO

3711 Middlebrook Pike Knoxville, TN 37921 **Lab ID:** K00002586

Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using good laboratory pratices and in accordance with federal or state approved methodologies.

Analytical Supervisor

K00002586001

Project Name:

Orange Ct Name.

Sample Description: Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY012.1RO

Date/Time Collected:

07/09/2009 09:58

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: Priority Date:

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

Dissolved Oxygen: 6.22

pH:

7.62

pH Units

Chlorine, residual:

Conductivity:

107

uMHO

Temperature:

25.50

mg/L

Other:

Flow:

TEST: Digestion Metals	MET	HOD: EPA 20	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009	,			S Ufegbu	7/11/2009

TEST: ICP	METHOD: EPA 200.7					
ANALYTE	RESULT UNITS MDL MQL ANALYZED BY: DA					DATE
Iron	170 μg/L 2.9 10 S Ufegbu 7/17					

TEST: ICP-MS METHOD: EPA 200.8						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	51	μg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	37	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.25J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.0	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.20J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	97	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.3	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	2.6J	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.36J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.2J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586001

Project Name:

Sample Description:

Emory River mile 12.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY012.1RO

Date/Time Collected: Sampler's Name:

07/09/2009 09:58

County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

TEST: Mercury ANIALNE

E McCrary

METHOD.	EDA 045 4

Field Determinations

Dissolved Oxygen: 6.22

Chlorine, residual:

Conductivity:

Temperature:

7.62

107

25.50

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

ANALYIE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.12J	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586002

Project Name:

Sample Description: Emory River mile 2.1

Sampler Project Name: TVA Ash Spill Project Site No.:

Station No.:

EMORY002.1RO

Date/Time Collected:

07/09/2009 11:02

Sampler's Name: County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

:Hq

8.24

pH Units

uMHO

Chlorine, residual:

Conductivity: Temperature: 149

27.80

Dissolved Oxygen: 8.27

mg/L

Other:

Flow:

TEST: Digestion Metals	MET	HOD: EPA 20	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	270	μg/L	2.9	10	S Ufegbu	7/17/2009	

TEST: ICP-MS	ME	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	400	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	0.39J	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	10	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	64	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	0.12J	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.56J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.5	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.85J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	58	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	1.8J	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	0.047J	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.33J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	7.4	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	7.6	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586002

Project Name:

Sample Description:

Emory River mile 2.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY002.1RO

Date/Time Collected:

07/09/2009 11:02

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced: **Priority Date:**

TDEC-WPC

Date/Time Received:

07/19/2009 07/09/2009

14:07

Received By:

E McCrary

Field Determinations

:Ha

8.24

pH Units

Chlorine, residual:

Conductivity:

149

uMHO

Temperature:

27.80

Dissolved Oxygen: 8.27

mg/L

Other:

Flow:

CFS

TEST: Mercury	WE	THOD: EPA 24				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586003

Project Name:

Sample Description:

Approx 100' D/S from middle dredge point

Sampler Project Name: TVA Ash Spill

Project Site No.: Station No.:

2A

Date/Time Collected:

Dredge Plume 07/09/2009 11:11

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

Dissolved Oxygen: 9.13

Chlorine, residual:

Conductivity:

Temperature:

pH:

Other:

Flow:

8.21

186

25.41

pH Units

uMHO

mg/L

TEST: Digestion Metals	MET					
ANALYTE	RESULT	UNITS	MDL.	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	240	μg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS	ME	METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	270	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	4.7J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	55	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	61	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.44J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.4	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.59J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	61	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.20J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	3.9J	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.0J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586003

Project Name:

Sample Description:

Approx 100' D/S from middle dredge point

Sampler Project Name: TVA Ash Spill

Project Site No.:

2A

Station No.:

Date/Time Collected:

Dredge Plume 07/09/2009 11:11

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

EFO:

Water

Sampling Agency: **Billing Code:**

Knoxville **TDEC-WPC**

Send Report To: Agency Invoiced:

327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

8.21 :Hq pH Units Chlorine, residual: Conductivity: 186 uMHO 25.41

Temperature:

Field Determinations

Dissolved Oxygen: 9.13

mg/L

Other:

Flow: **CFS**

TEST: Mercury	METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.05J	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586004

Project Name:

Sample Description:

Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

2B

Station No.:

EMORY001.9RO

Date/Time Collected: Sampler's Name:

07/09/2009 11:17

County:

Geoff Klein

Sample Matrix:

ROANE - 73 Water

EFO: Sampling Agency: Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

pH:

8.34

pH Units

Chlorine, residual:

Conductivity:

187

uMHO

Temperature:

25.23

Dissolved Oxygen: 9.43

mg/L

Other:

Flow:

TEST: Digestion Metals	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	220	μg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS	ME	METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	240	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.2J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	53	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	υ	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.40J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.4	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.53J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	58	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.19J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	3.7J	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.0J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586004

Project Name:

Sample Description: Emory River mile 1.9 at underwater weir

Sampler Project Name: TVA Ash Spill

Project Site No.:

2B

Station No.:

EMORY001.9RO

Date/Time Collected:

07/09/2009 11:17

Sampler's Name:

Geoff Klein

County:

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20

Send Report To: Agency Invoiced: TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

:Hq 8.34

Chlorine, residual:

187

pH Units

Conductivity:

25.23

uMHO

Temperature: **Dissolved Oxygen: 9.43**

mg/L

Other:

Flow:

CFS

ME					
RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
U	μg/L	0.029	0.2	A Bass	7/14/2009
		RESULT UNITS		RESULT UNITS MDL MQL	RESULT UNITS MDL MQL ANALYZED BY:

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY001.7RO

Date/Time Collected:

07/09/2009 11:26

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency:

Knoxville

Billing Code:

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: **Agency Invoiced: Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

07/11/2009

Received By:

Digestion Metals

E McCrary

TEST: Digestion Metals	ME ⁻	THOD: EPA 20	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE

Field Determinations

Dissolved Oxygen: 10.35

Chlorine, residual:

Conductivity:

Temperature:

pH:

Other:

Flow:

8.55

244

25.67

S Ufegbu

pH Units

uMHO

mg/L

CFS

7/11/2009

TEST: ICP METHOD: EPA 200.7							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	210	μg/L	2.9	10	S Ufegbu	7/17/2009	

TEST: ICP-MS	ME	METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	230	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.3J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	49	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.38J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.9	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.47J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	57	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.6	μg/Ĺ	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.089J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	3.7J	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.7J	μg/L	1.9	5	M Pattanáyek	7/17/2009

K00002586005

Project Name:

Sample Description:

Emory River mile 1.7

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY001.7RO

Date/Time Collected: Sampler's Name:

07/09/2009 11:26

County:

Geoff Klein ROANE - 73

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville TDEC-WPC

Billing Code: Send Report To: 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

рН:

8.55

pH Units

Chlorine, residual:

Conductivity:

244

uMHO

Temperature:

25.67

Dissolved Oxygen: 10.35

mg/L

Other:

Flow:

CFS

TEST: Mercury	ME					
ANALYTE	RESULT	UNITS	MDL.	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

4

Station No.:
Date/Time Collected:

EMORY000.1RO 07/09/2009 11:34

Sampler's Name:

Geoff Klein

County: Sample Matrix:

ROANE - 73

EFO: Sampling Agency:

Water Knoxville

Billing Code:

TDEC-WPC 327.34-20 TDEC-WPC

Send Report To: Agency Invoiced: Priority Date:

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

Dissolved Oxygen: 11.08

pH:

8.59

pH Units

Chlorine, residual:

Conductivity:

276

uMHO

Temperature:

24.88

mg/L

Other:

Flow:

TEST: Digestion Metals	MET	HOD: EPA 20	0.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	270	μg/L	2.9	10	S Ufegbu	7/17/2009	

TEST: ICP-MS	ME	ΓHOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	200	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	0.82J	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	2.6J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	47	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	υ	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.43J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	2.2	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.52J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	68	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.8	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	· U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.071J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	2.9J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586006

Project Name:

Sample Description:

Emory River mile 0.1

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

EMORY000.1RO

Date/Time Collected:

07/09/2009 11:34

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency: Billing Code:

Knoxville TDEC-WPC

Send Report To:

327.34-20 TDEC-WPC TDEC-WPC

Agency Invoiced: **Priority Date:**

07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

pH:

8.59

pH Units

Chlorine, residual:

Conductivity:

276

uMHO

Temperature:

24.88 Dissolved Oxygen: 11.08

mg/L

Other:

Flow:

CFS

TEST: Mercury	ME					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

K00002586007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected: Sampler's Name:

07/09/2009 11:48

County:

Geoff Klein ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH:

8.23

pH Units

Chlorine, residual:

Conductivity:

278

uMHO

Temperature:

26.03

Dissolved Oxygen: 9.20

mg/L

Other:

Flow:

TEST: Digestion Metals	MET	METHOD: EPA 200.2					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Digestion Metals	07/11/2009		•		S Ufegbu	7/11/2009	

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	180	μg/L	2.9	10	S Ufegbu	7/17/2009	

TEST: ICP-MS	ME	ΓHOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	210	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	2.7J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	47	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.31J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.7	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.37J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	34	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.5	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.062J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	4.4J	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	2.6J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586007

Project Name:

Sample Description:

Clinch River mile 2.3

Sampler Project Name: TVA Ash Spill

Project Site No.:

Station No.:

CLINC002.3RO

Date/Time Collected:

07/09/2009 11:48

Sampler's Name: County:

Geoff Klein

ROANE - 73

Sample Matrix: EFO:

Water

Sampling Agency:

Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 **TDEC-WPC**

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009 14:07

Received By:

E McCrary

Field Determinations

pH:

8.23

pH Units

Chlorine, residual:

Conductivity:

278

uMHO

Temperature:

26.03 Dissolved Oxygen: 9.20

mg/L

Other:

Flow:

CFS

TEST: Mercury						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit MQL - Method Quantitation Limit

K00002586008

Project Name:

Clinch River TVA Discharge Point

Sample Description: Sampler Project Name: TVA Ash Spill

Project Site No.: Station No.:

5A

KingAshOutF2

Date/Time Collected:

07/09/2009 11:54

Sampler's Name: County:

Geoff Klein

Sample Matrix:

ROANE - 73

EFO:

Water Knoxville

Sampling Agency: **Billing Code:**

TDEC-WPC

Send Report To: Agency Invoiced: 327.34-20 TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field Determinations

:Hq

8.04 Chlorine, residual:

284

pH Units

Conductivity: Temperature:

26.80

uMHO mg/L

Dissolved Oxygen: 8.38

Other:

Flow:

TEST: Digestion Metals	MET					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP	METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Iron	280	μg/L	2.9	10	S Ufegbu	7/17/2009	

TEST: ICP-MS	ME ⁻	THOD: EPA 20	0.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	370	μg/L	6.4	10	A Wilson	7/19/2009
Antimony	0.53J	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	3.9J	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	56	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.46J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	5.1	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.61J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	46	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.7	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	0.034J	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.81J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	6.2	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	4.2J	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586008

Project Name:

O-----I- Daniel

Sample Description: Clinch River TVA Discharge Point

Sampler Project Name: TVA Ash Spill

Project Site No.:

5A

Station No.:

KingAshOutF2

Date/Time Collected:

07/09/2009 11:54

Sampler's Name:

Geoff Klein

County: Sample Matrix:

ROANE - 73

EFO:

Water

Sampling Agency: Billing Code:

Knoxville TDEC-WPC 327.34-20

Send Report To: Agency Invoiced:

TDEC-WPC TDEC-WPC 07/19/2009

Priority Date:
Date/Time Received:

07/19/2009

Passived Pv

07/09/2009

14:07

Received By:

E McCrary

TEST: Mercury	METHOD: EPA 245.1							
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE		
Mercury	0.03J	μg/L	0.029	0.2	A Bass	7/14/2009		

Field Determinations

Dissolved Oxygen: 8.38

Chlorine, residual:

Conductivity:

Temperature:

8.04

284

26.80

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

Sample Description:

K00002586009

Project Name:

Sampler Project Name: TVA Ash Spill

Clinch River mile 4.5 near Sugar Grove Valley R Chlorine, residual:

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected:

07/09/2009 12:04

Sampler's Name:

Geoff Klein

County: Sample Matrix: ROANE - 73

Water

EFO: Sampling Agency: Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20

Agency Invoiced:

TDEC-WPC TDEC-WPC

Priority Date:

07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

Field	Determinations
pH:	8.22

280

pH Units uMHO

Conductivity: Temperature:

22.14

Dissolved Oxygen: 10.44 Other:

Flow:

CFS

mg/L

TEST: Digestion Metals	METHOD: EPA 200.2				/	
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	07/11/2009				S Ufegbu	7/11/2009

TEST: ICP METHOD: EPA 200.7						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	120	μg/L	2.9	10	S Ufegbu	7/17/2009

TEST: ICP-MS	METHOD: EPA 200.8					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	110	μg/L	6.4	10	M Pattanayek	7/17/2009
Antimony	U	μg/L	0.33	1	M Pattanayek	7/17/2009
Arsenic	U	μg/L	0.93	5	M Pattanayek	7/17/2009
Barium	42	μg/L	2.5	5	M Pattanayek	7/17/2009
Beryllium	U	μg/L	0.11	1	M Pattanayek	7/17/2009
Cadmium	U	μg/L	0.41	1	M Pattanayek	7/17/2009
Chromium ·	U	μg/L	2.0	5	M Pattanayek	7/17/2009
Cobalt	0.29J	μg/L	0.04	1	M Pattanayek	7/17/2009
Copper	3.0	μg/L	0.38	1	M Pattanayek	7/17/2009
Lead	0.30J	μg/L	0.10	1	M Pattanayek	7/17/2009
Manganese	36	μg/L	0.42	1	M Pattanayek	7/17/2009
Nickel	1.6	μg/L	0.25	1	M Pattanayek	7/17/2009
Selenium	· U	μg/L	1.3	5	M Pattanayek	7/18/2009
Silver	U	μg/L	0.03	0.25	M Pattanayek	7/17/2009
Thallium	0.18J	μg/L	0.03	1	M Pattanayek	7/17/2009
Vanadium	U	μg/L	3.4	5	M Pattanayek	7/17/2009
Zinc	6.8	μg/L	1.9	5	M Pattanayek	7/17/2009

K00002586009

Project Name:

Field Determinations

Dissolved Oxygen: 10.44

Conductivity:

Temperature:

8.22

280

22.14

pH Units

uMHO

mg/L

CFS

pH:

Other:

Flow:

Sample Description: Sampler Project Name: TVA Ash Spill

Clinch River mile 4:5 near Sugar Grove Valley R Chlorine, residual:

Project Site No.:

Station No.:

CLINC004.5RO

Date/Time Collected:

07/09/2009 12:04

Sampler's Name:

Geoff Klein

County:

ROANE - 73

Sample Matrix:

Water

EFO: Sampling Agency: Knoxville

Billing Code: Send Report To: TDEC-WPC 327.34-20 TDEC-WPC

Agency Invoiced: **Priority Date:**

TDEC-WPC 07/19/2009

Date/Time Received:

07/09/2009

14:07

Received By:

E McCrary

TEST: Mercury	METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	μg/L	0.029	0.2	A Bass	7/14/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit